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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re application of : Attorney Docket No.: RR3  
Applicant: Richard REISMAN :  
Serial No.: (unknown) : GAU: 2317  
Filed: (herewith) : Examiner: K. Kim  
For: "COMPUTER-IMPLEMENTED :  
TRANSPORT OF ELECTRONIC  
INFORMATION OBJECTS" :  
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December 1, 1997

The Assistant Commissioner of Patents and Trademarks  
Washington, D.C. 20231

PRELIMINARY AMENDMENT

SIR.

Prior to calculation of the filing fee, please make the following amendments to  
the accompanying 37 CFR §1.60 application:

IN THE SPECIFICATION:

Page 14, line 15, before the period insert <sup>as</sup>, for example, a network file system

providing distributed file management functions permitting simple transport  
of files between network stations<sup>as</sup>.

Page 20, line 9, after "additional", insert --transport-related--;

Page 28, line 6, after "object 26.", insert <sup>as</sup> The storage media used for hard disks and

the like are often described as nonvolatile and the type of storage is frequently referenced as "permanent". However, the more recently used term "persistent storage" which references the manner of storage as well as the physical storage media and distinguishes from transient storage where objects may be automatically erased after some interval, or event, without supervisory control or awareness of the erasure, is a more suitable descriptive term for the purposes of the present invention.--;

Page 39, line 21, before the period, insert --and which provides the ubiquitous Web pages for the Internet's World Wide Web--;

Page 46, line 22, insert as a separate paragraph:

--Those skilled in the art will appreciate that the identification of files in the object manifest, or for file maintenance functions at the user station, or for any other purpose of the invention, can be effected generically, for example by using wild card characters, as is customary in file specification, and which effectively permits multiple objects to be specified as a class related by file name characteristics, or related individually, thereby providing options for specifying transport of such class of multiple objects to proceed at one time or in a series of transports over time. Other algebraical identification methods can be used which may reference object versions in series or comparable characteristics.--

Page 57, line 7, delete "by allowing";

Page 71, line 9, after the period, insert On the Internet, such broadcasting to a

selected group of recipients is called "multicasting".--;

Page 72, line 4, delete the second comma;

Page 72, line 5, delete the comma;

Page 72, line 7, delete the comma;

Page 72, line 14, after "content." insert --As the transporter 14, operating at the

user stations, automatically fetches new issues according to the newsletter schedule, the information is, in effect, pushed down a channel from the distribution server for delivery to the base of subscribing users.

Page 72, line 24 correct "on" to read --or--;

#### IN THE CLAIMS:

Please AMEND the claims as follows:

Please CANCEL claim 1, *without prejudice*.

Please ADD new claims 34-83, as follows:

34. (new) An automated electronic information transporter located at a user station for controlling transport of information objects on a communications network providing access to multiple remote sources, the information transporter comprising:

a) a communications software module for effecting the fetching or sending of

information objects across the network between at least one of the remote sources and persistent storage at the user station; and

b) transport control means to control transport of the information objects including

- i) a source address for the at least one remote source station; and
- ii) an object manifest specifying at least one information object to be transported;

wherein the object manifest constitutes an object transport control structure for communication of object transport-related specifications between the transport control means and a higher level software entity.

35. (new) An information transporter according to claim 34 wherein the higher level software entity is selected from the group consisting of a user station user interface, a containing information product located at the user station and containing the information transporter, a database management module located at the user station and providing database processing of an information product available to the user station and a remote software entity.

36. (new) higher level software entity comprises a viewer for at least one content type available on the communications network, the content type being selected from

the group consisting of ASCII text, word processor, spreadsheet or database formats, multimedia formats, video formats, sound formats and hypertext markup language ("HTML").

37. (new) An information transporter according to claim 36 wherein the communications network is the Internet.

38. (new) An information transporter according to claim 34 wherein the higher level software entity can be invoked to modify the object manifest to specify in the object manifest, for each information object listed, one or more desired object transport-related specifications selected from the group consisting of object name, object size, object location, object content, object format and object availability.

39. (new) An information transporter according to claim 34 wherein:

- i) the communications network is a broadcast network comprising multiple user stations each provided with the information transporter;
- ii) at least one of the remote sources broadcasts a data stream across the network for receipt by the user stations; and
- iii) the object manifest at each user station comprises transport-related specifications defining data stream content elements for receipt by the user

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station.

40. (new) An information transporter according to claim 34 wherein:

- i) the communications network comprises a group of user stations each provided with the information transporter and each being a client station of an information object distribution service provided by at least one of the remote sources;
- ii) the at least one remote source has, for each user station, an object manifest received across the network from the user station and specifying user station identification information; and
- iii) each user station repeatedly receives objects sent by the at least one remote source.

41. (new) An information transporter according to claim 40 wherein the object manifest received at the remote source specifies user-desired content and the information objects sent by the remote source to the user station are selected according to the user-desired content specification.

42. (new) An information transporter according to claim 41 wherein the user-desired content specification comprises a generic or an alias name to request a latest

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~~iv) each user station transporter is scheduled to communicate repeatedly and automatically with the at least one remote source and fetch information objects specified by the selected features entries in the object manifest.~~

47. (new) An information transporter according to claim 34 wherein:

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- i) the communications network comprises a group of user stations each provided with the information transporter and each being a client station of an information object distribution service provided by at least one of the remote sources:
  - ii) the at least one remote source has, for each user station, an object manifest received across the network from the user station and comprising user-specified information object selections; and
  - iii) each user station transporter can fetch or receive a response object from the remote source providing the user-specified information object selections.

48. (new) An information transporter according to claim 34 embedded in a containing information product whereby transporter functionality is activatable via the information product.

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52. (new) An information transporter according to claim 34 wherein the object manifest comprises metadata about information objects to be transported and about the



time and location availability of said information objects.

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*cont.*  
53. (new) An information transporter according to claim 34 wherein the object manifest is assembled from one or more data sources selected from the group consisting of data preloaded at the user station, data from a directory of information objects fetched from one of the remote sources, data generated by user interaction, data obtained from processing by a containing information product containing the transporter, data from processing by a user interface or database management tools integrated with the transporter and data from processing at one of the remote sources.

54. (new) An information transporter according to claim 34 wherein the object manifest is used for the exchange of data between the transporter and one or more data sources selected from the group consisting of data preloaded at the user station, data from a directory of information objects fetched from one of the remote sources, data generated by user interaction, data obtained from processing by a containing information product containing the transporter, data from processing by a user interface or database management tools integrated with the transporter and data from processing at one of the remote sources.

55. (new) An information transporter according to claim 34 being for general

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purpose information transport having transport control and manifest control structures operative independently of the transported information object type and suited to control of transport of an unlimited set of object types.

*control*

56. (new) An information transporter according to claim 34 wherein the object manifest received at the remote source employs a generic or an alias name to specify user-desired content and the information objects sent by the remote source to the user station are selected according to the user-desired content specification.

57. (new) An information transporter according to claim 34 wherein the transport control means specifies object processing actions required to prepare or receive an object for or from transport.

58. (new) An information transporter according to claim 34 wherein the user station comprises multiple communications protocols and the transport control means comprises a protocol selection code.

59. (new) An information transporter according to claim 34 wherein the manifest list is mobile and transportable in the transport session, moving in one direction between the source station and the user station to request at least one information object to be

sent in the other direction between the source station and the user station.

60. (new) An information transporter according to claim 34 wherein the transport control means includes an object manifest comprising a send object list, a fetch object list or both a send object list and a fetch object list.

61. (new) An information transporter according to claim 60 wherein the user station includes an information product having a user interface and being provided by a vendor associated with the source and wherein the object manifest is created under control of the user interface from a set of choices supplied by the vendor.

62. (new) An information transporter according to claim 60 wherein the send object list comprises one or more object list elements selected from the group consisting of object action codes specifying source station actions required, object names, object sizes and response object size.

63. (new) An information transporter according to claim 60 wherein the fetch object list comprises one or more object list elements selected from the group consisting of object names, object sizes and object availability dates.

64. (new) An information transporter according to claim 34 wherein the transport control means includes a completed object manifest having manifest codes to convey the status of the transport operation or to provide for transport of additional information objects, or both.

65. (new) An information transporter according to claim 64 wherein for a send operation in which an information object is transported from the user station to the source station, the completed object manifest comprises one or more manifest elements selected from the group consisting of send object additional information, object acceptance codes returned by the source, time of object acceptance codes, response object names and a completion status code to terminate the send operation and return control.

66. (new) An information transporter according to claim 65 wherein the completed object manifest further comprises polling indicator codes enabling polling of the user station by the source station for readiness to perform additional transport operations.

67. (new) An information transporter according to claim 65 wherein the completed object manifest further comprises scheduled update indicator codes enabling scheduled fetching of updates by the user station from the source station.

68. (new) An information transporter according to claim 34 wherein, for a fetch operation in which an information object is transported from the source station to the user station, the completed object manifest comprises one or more manifest elements selected from the group consisting of fetch object additional information, fetch confirmation or failure codes, time of completion or failure codes, a revised availability date for a requested fetch object found to be unavailable and a completion status code.

69. (new) An information transporter according to claim 68 wherein the completed object manifest further comprises polling indicator codes enabling polling of the user station by the source station for readiness to perform additional transport operations.

70. (new) An information transporter according to claim 68 wherein the completed object manifest further comprises scheduled update indicator codes enabling scheduled fetching of updates by the user station from the source station.

71. (new) An information transporter according to claim 34 wherein the transport control means comprises an object manifest specifying an information object to be fetched from the source and transported to the user station and wherein the fetched object comprises a directory of features available from the source.

72. (new) An information transporter according to claim 71 wherein the transport control means is operative to create a revised object manifest specifying at least one feature obtained from the fetched directory.

73. (new) An information transporter according to claim 34 wherein the system comprises a transport software component embeddable in a vendor-provided containing information product, the vendor providing update objects at the at least one source station, the transport component being separately suppliable to one or more vendors of multiple containing electronic information products.

74. (new) An information transporter according to claim 73 wherein the information transport software component has a user interface in the containing information product permitting specification of transport objects in the object manifest.

75. (new) A method of controlling transport of information objects between persistent storage at a user station and at least one remote information object source on a communications network, the user station including an information transporter comprising a communications software module for sending and receiving information objects on the network and including a higher level software entity, wherein the method comprises:

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- a) communicating object transport specifications, including a source address for the at least one remote source, between the information transporter and the higher level software entity employing an object manifest listing at least one information object to be transported; and
  - b) activating the communications software module to transport the at least one information object to or from the source address, in accordance with the manifest.

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76. (new) A method according to claim 75 wherein the communications network is a broadcast network comprising multiple user stations each provided with the information transporter and at least one of the remote sources broadcasts a data stream across the network for receipt by the user stations, the method comprising;

- c) receiving at each user station data stream content elements defined by specifications in the object manifest.

77. (new) A method according to claim 75 wherein the communications network comprises a group of user stations each provided with the information transporter and each being a client station of an information object distribution service provided by at least one of the remote sources the method comprising;

- c) sending to the at least one remote source from each user station, an object

~~manifest specifying user station identification information; and~~

- d) ~~repeatedly transporting information objects to each user station from the at least one remote source.~~

78. (new) A method according to claim 77 wherein the object manifest received at the remote source specifies user-desired content with a generic or an alias name and wherein the method comprises:

- e) the remote source sending to the user station latest installment, version or update information objects selected according to the generic or alias name.

79. (new) A method according to claim 75 wherein the communications network comprises a group of user stations each provided with the information transporter, the object manifest at each user station contains source-originated information object specifications and each user station is a client station of an information object distribution service provided by at least one of the remote sources and wherein the method comprises:

- c) scheduling each user station transporter to communicate repeatedly and automatically with the at least one remote source and fetch information objects meeting the source-originated specifications.



80. (new) A method according to claim 75 further comprising verifying fetched objects against the object manifest.

81. (new) A method according to claim 75 wherein the communications network comprises a group of user stations each provided with the information transporter and each being a client station of an information object distribution service provided by at least one of the remote sources, the method further comprising:

- c) sending to the at least one remote source, from each user station, an object manifest comprising user-specified information object selections; and
- d) scheduling each user station transporter to communicate repeatedly and automatically with the at least one remote source and fetch information objects meeting the user specifications.

82. (new) A method according to claim 75 wherein the communications network comprises a group of user stations each provided with the information transporter and each being a client station of an information object distribution service provided by at least one of the remote sources, the method comprising;

- c) each user station fetching a features directory from the at least one remote source, being a directory of features available at the remote source;
- d) building at each user station an object manifest containing selected feature entries

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obtained from the fetched features directory; and

- e) scheduling each user station transporter to communicate repeatedly and automatically with the at least one remote source and fetch information objects specified by the selected features entries in the object manifest.

83. (new) A method according to claim 75 wherein the communications network comprises a group of user stations each provided with the information transporter and each being a client station of an information object distribution service provided by at least one of the remote sources, the method comprising:

- c) sending to the at least one remote source, from each user station, an object manifest comprising user-specified information object selections; and  
d) using each user station transporter to fetch or receive a response object from the remote source providing the user-specified information object selection.

#### REMARKS

Minor amendments have been made to the specification by way of correction, clarification or explanation.

In general terms, the invention as claimed in base claims 34 and 75 relates to the use of a manifest to control automated transport by specifying one or more


servers and objects and related parameters. The invention thus provides a widely applicable information transporter and method, which are readily accessible to users and their applications at a relatively high level and which are not limited in their functionality by the specific procedural details of any particular transport process which details may vary by type of network and usage context, and may in many cases be obtained from available system services.

The manifest is a control structure which includes data describing the data to be transported, which descriptive data is sometimes known in the art as "metadata". Pursuant to the invention, as now claimed, the metadata in the manifest can, in a simple embodiment, include three elements, namely data about *what* information is to be updated, *when* an update is to be made, and *how* to transport the updated information. This data can be processed by the user station as described herein.

The use of a manifest to enable decentralized control by user stations dispersed on a network based on metadata which may be provided from a central source, or generated locally, clearly distinguishes from Frye and Xcellenet of record on the parent application because Frye's and Xcellenet's updates rely upon centrally controlled, centrally specified procedures to effect the transfers.

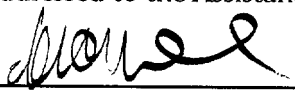
The application is now believed to be in condition for examination on the merits. Early and favorable examination is earnestly solicited. If for any reason the Examiner feels that consultation with Applicant's attorney would be helpful in the advancement of the prosecution, he is invited to call the telephone number below for an interview.

Respectfully submitted,

By:   
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I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner of Patents and Trademarks, Washington, DC 20231.

  
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